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(54) Heater panels

(57) A hot plate 10 comprises a cast-iron substrate having on its upper surface a vitreous enamel casting 14 and a peripheral rim 16 and on its underside a dependent ridge 20 which acts as a barrier against ingress of fat to a peelably-removable heater blanket 28. An asbestos board 34 having a heat-reflective layer 36 is secured below the substrate 12.

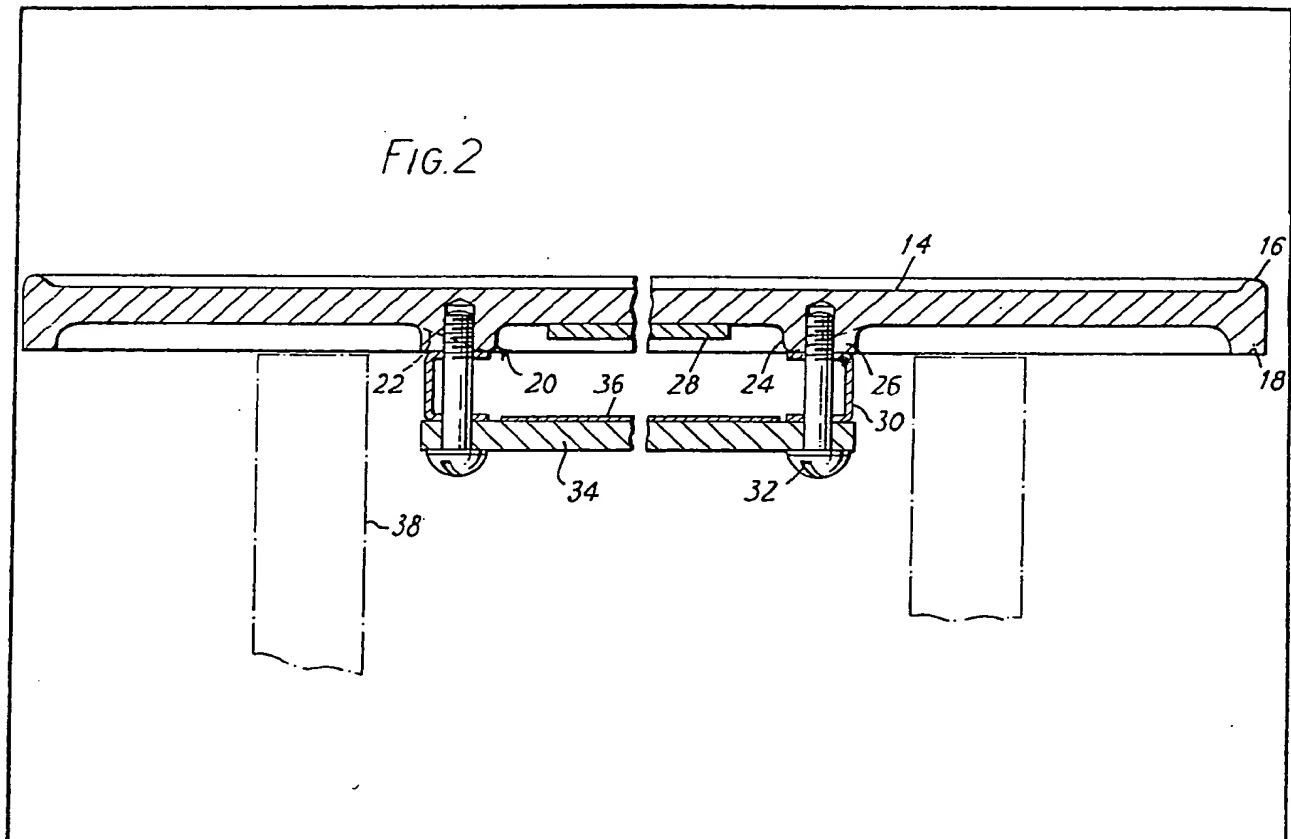


FIG. 1

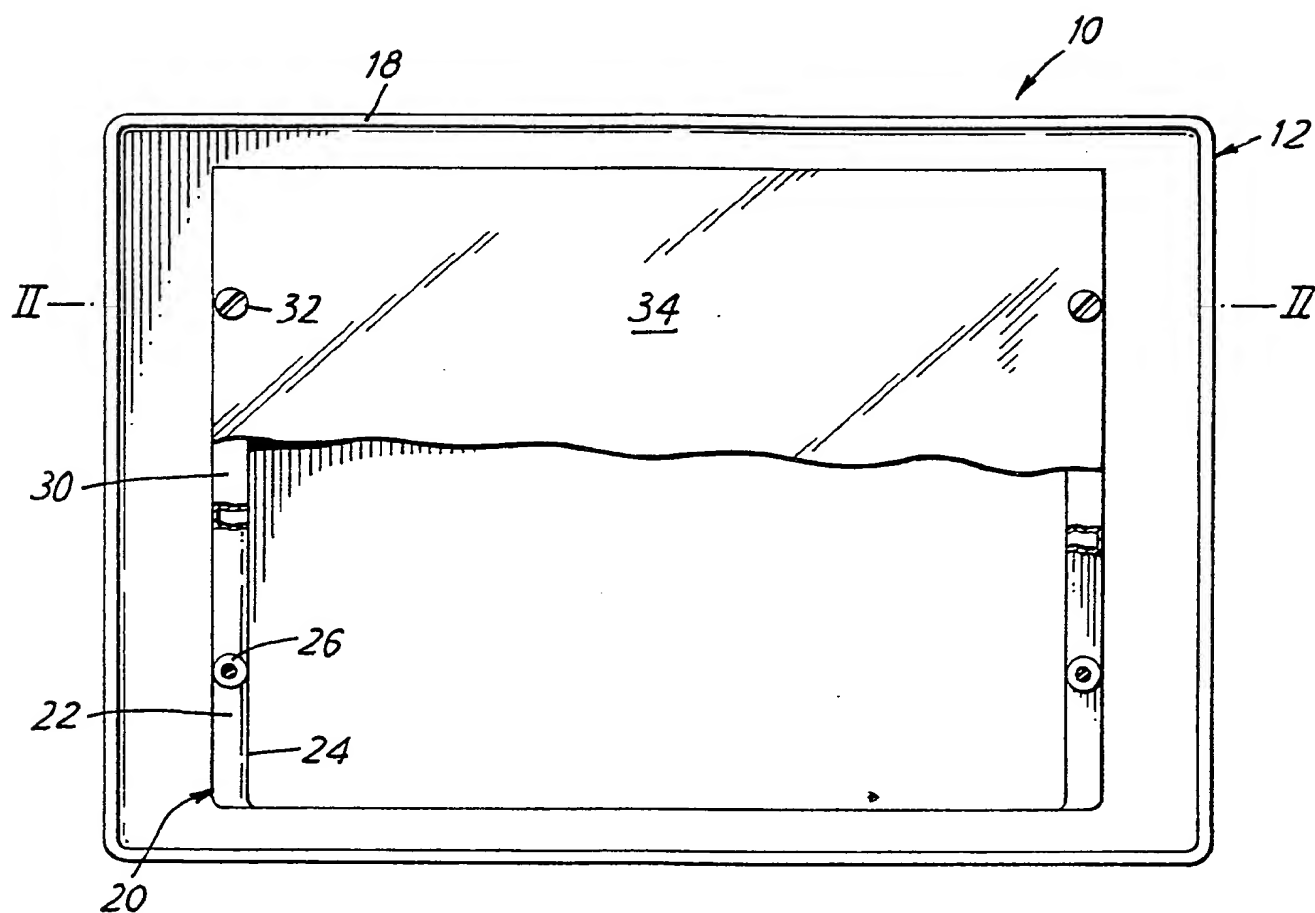
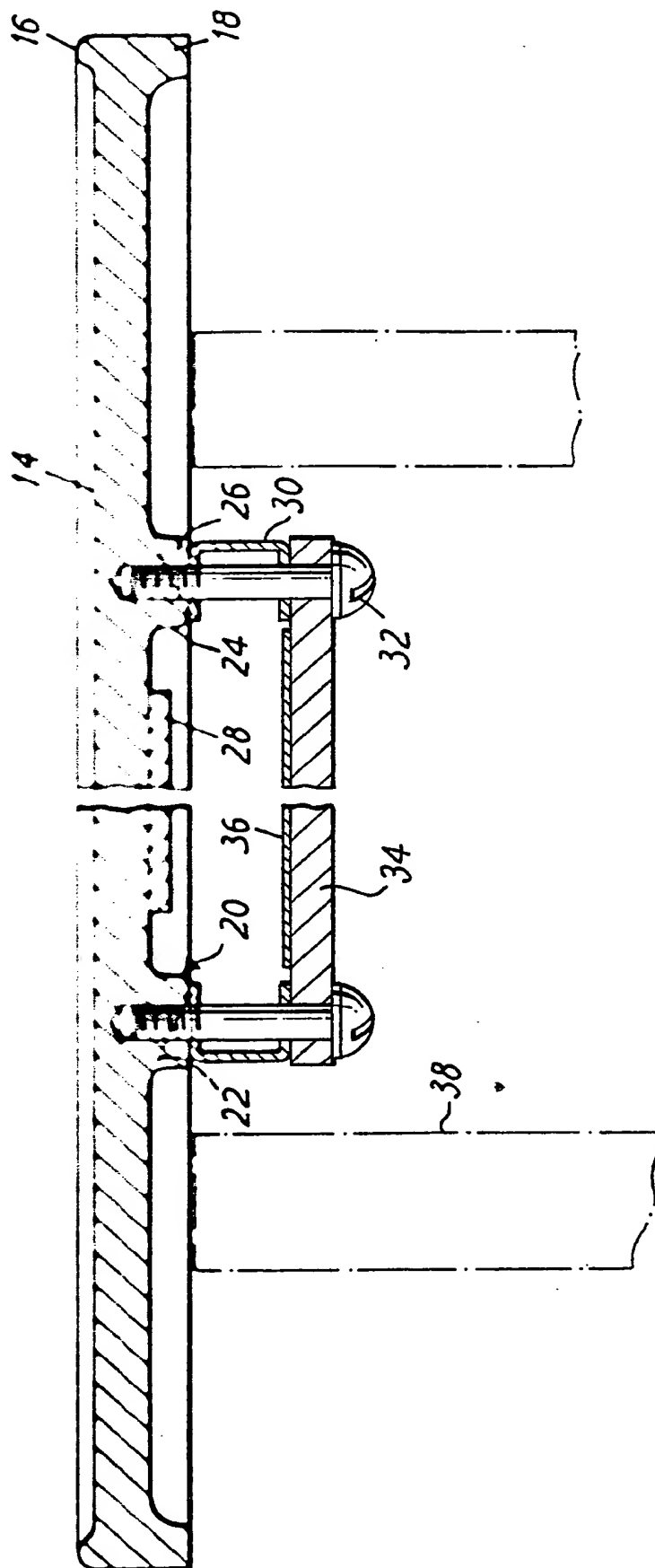


FIG. 2



SPECIFICATION Heater Panels

This invention relates to heater panels used as hobs or hot plates.

- 5 Although such panels are usually of ceramic material, such material is unable to withstand the prolonged heating periods to which it is subject in commercial use and tends to become brittle and consequently liable to crack on cooling; and also
10 becomes more liable to fracture by impact if a heavy vessel is put carelessly on it.

- According to the present invention the panel is formed of, for example, cast iron or cast aluminium and coated on at least its upper
15 surface with a layer of vitreous enamel. Heated vitreous enamel panels according to the present invention, besides presenting a very durable and easily cleaned surface, may also be made very decorative lending themselves, as they do, to the
20 employment of any desired pattern and colour scheme; for example user acceptance may be enhanced if the panel is made to simulate a glass panel with embedded heating elements of the type with which users are already familiar.

- 25 An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings in which

- Figure 1 is an underside plan, partly broken away, of a heater panel according to the present
30 invention; and

Figure 2 is a broken section, on an enlarged scale, on the line II—II in Fig. 1.

- As shown in Figs. 1 and 2 a heater panel 10 comprises a rectangular iron casting 12 having on
35 its upper surface a coating of high grade vitreous enamel 14 and a peripheral rim 16. On the underside of the casting 12 below the rim 16 is a lip 18 having a flat undersurface and, inset therefrom, a dependent ridge 20 having an outer
40 surface 22 which is inclined at an angle of about 20° to the undersurface of the casting 12 and an inner face 24 which is substantially perpendicular thereto. The shorter opposed lengths of the ridge 20 are inset more from the lip 18 than are the
45 longer lengths and are each formed with two bosses 26 having flat undersurfaces. A heater blanket 28 is peelably secured to the underside of the casting 12 by a heat-resistant adhesive and occupies the area bounded by the ridge 20.

- 50 Spaced from the underside of the casing 12 by channels 30 and secured by screws 32 received in the bosses 26 is a suspended asbestos board 34 covered with a reflective foil 36 which effects a 25% saving in the
55 consumption of electricity.

The hot plate 10 is supported on two bearers 38 and is usually when installed set within a surrounding top (not shown), a seal being

interposed between the casting 12 and the top.

- 60 If such a seal should break down in the case of a normal hotplate fat seeps through to the underside of the hotplate of the top causing a nasty mess which tends to become burnt on, becomes a source of unpleasant smells, and is
65 difficult to clean up. In the case of the hot plate 10 fat seepage would be particularly deleterious as it would cause the heater blanket 28 to disintegrate. The hot plate 12 overcomes the problem of fat seepage should the seal break
70 down, firstly by the provision of the rim 16 which tends to confine spilt fat within the upper surface of the casting 12 and, secondly, by the effects of the lip 18 and the ridge 20 which has a cross-section such that any fat that does run round the
75 lip 18 and along the margin of the underside of the casting 12 drips off the apex of the ridge 20 before it reaches the blanket 28.

- If the heater blanket 28 becomes defective or is damaged it is a simple matter to replace it by
80 unscrewing the screws 32, removing the board 34 and peeling off the old blanket 28.

It will be appreciated that, while the described casting 12 is rectangular in plan, it could equally well be circular.

85 Claims

1. A heater panel comprising a substrate of a heat-resistant material coated on at least its upper surface with a layer of vitreous enamel.

2. A panel as claimed in Claim 1, in which
90 said material is iron.

3. A panel as claimed in Claim 1, in which said material is steel.

4. A panel as claimed in any preceding claim, in which said layer bears a decorative pattern.

- 95 5. A panel as claimed in Claim 4, in which the pattern resembles a glass panel with embedded heating elements.

6. A panel as claimed in any preceding claim and having heating means secured to the
100 underside thereof.

7. A panel as claimed in Claim 6, in which the heating means are constituted by one or more heating elements secured by a heat-resistant adhesive.

- 105 8. A panel as claimed in Claim 7, in which the adhesive is such as to allow the one or more elements to be peeled off the underside to facilitate replacement thereof.

- 110 9. A panel as claimed in any preceding claim and additionally comprising heat-reflection means facing and spaced from said area.

10. A panel as claimed in Claim 1 and substantially as herein described.

- 115 11. A heater panel substantially as herein described with reference to the accompanying drawings.